Flash MPX

Firmware 1.2

MANUAL

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WARNING: DO NOT EXPOSE TO MOISTURE AND DUST!
Unplug the power cord before any intervention!
FOR YOUR SAFETY, PLEASE READ CAREFULLY THIS OPERATION MANUAL
BEFORE USING YOUR PLAYER.

1. SAFETY INSTRUCTIONS

1.1 CE marking
The CE marking is on the ID plate, at the back of the product. It means this product complies with the low voltage CE directive, according the EN 55022 standard, and the EMC directive 61000-4-x.

1.2 Directives
• Electro-magnetic compatibility (EMC) and low voltage directive requirements are satisfied.

1.3 Overview
• The user's manual forms an integral part of the unit. It must be kept close to the unit. Precise observance of these instructions is a pre-condition to use the unit for the intended purpose and for its correct operation.

This user's manual must be passed on to any future purchaser or operator.
The staff would receive instructions concerning the correct use of the product.

• Safety for the operator as well as trouble-free operation of the unit is only ensured if use is made of original equipment parts. Moreover, use may only be made of those accessories that are specified in the technical documentation or that have been expressly approved by the manufacturer. The manufacturer cannot guarantee for the safety or proper functioning of the unit in the case where accessories or consumables are used which are not supplied by the manufacturer.

• The warranty doesn't cover damages caused by use of accessories or consumables which are not supplied by the manufacturer.

• The manufacturer only regard himself as being responsible for the equipment with regard to safety, reliability and proper functioning if assembly, re-settings, changes or modifications, extensions and repairs have been carried out by the manufacturer or a company authorized by the manufacturer and if the equipment is used in conformity with the operating instructions written in this manual.

• The player complies with the applicable technical safety standards at the date of print. All rights reserved for electrical diagrams, procedures, mentioned names and equipments.

• No reproduction, in whole or in part, without the written permission from Waves System.

1.4 General safety instructions
This equipment left our facilities in perfect conditions of operation. In order to maintain these conditions, for safety and to avoid any risk of injury, the user must imperatively follow the safety instructions and read the ´Warning!´ notes in this manual. This equipment has been so designed that any danger is virtually excluded provided it is used according to its purpose. However, for safety reasons, we are obliged to point out the following measures:

• When operating this appliance, observe all local rules and enforced regulations! The homologation shall be invalid if any modification or alteration is made on the appliance. Operating modified appliances may lead to a penal suit. In the interest of the safety of work, the manager and the operator will be responsible for respecting the instructions.

• Retain all packing material in case the device must be shipped. Take care that it does not fall into the hands of children. Only the original packing guarantees optimal safety of the appliance during transport. Should it be necessary to ship the product during the guarantee period, Waves System will not accept claims for damage arising during the transport from using incorrect packing material!

• This product is dedicated to broadcasting music. It may only be operated by trained or knowledgeable personnel who can handle the device correctly.

• Before every use, the operator must check the functional safety and the condition of the appliance and must be knowledgeable in the operation of the appliance.

• This device must not be used in places with potential explosion risk. Moreover, it must not be used in an environment favouring combustion neither in a wet or excessively hot or cold place.

1.5 Safety instructions against risks pertaining to electrical current

• The appliance must be connected to a grounded AC power outlet or a correctly wired CEE AC outlet.

• Before connecting the appliance, verify that the power supply voltage and frequency match the specifications indicated on the appliance.

• Before powering, check that the appliance and the cables are not damaged. Damaged cables and connections must be immediately replaced.

• Never leave power cords enter in contact with other cables! Handle the power cord and all the cables connected to a power supply with extreme care.

• Always connect the power supply last. Check that the power switch is ´off' before connecting the appliance to mains supply. The mains outlet must be accessible after installation.

• Always grasp only the plug on the power supply cord. Never pull the cable to unplug.

• Power supply, repairs and maintenance must be done by qualified personnel.

• Do not switch the appliance on and off in short intervals, as this may reduce its life, especially concerning the hard disk.

1.6 - Conditions of use :

• This product has been designed for indoor use only.
• If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.
• Do not shake the device. Avoid brute force when installing or operating the device.
• When choosing the installation-spot, please make sure that the device is not exposed to extreme heat, moisture or dust. There should not be any cables lying around, for your own safety and that of bystanders.

2. PRODUCT INFORMATION

2.1 Correct usage

The player is designed for automatically broadcasting music, audio, video files.
Correct usage implies observation of the instructions in this manual as well as observing the requirements concerning installation.

2.2 Incorrect usage

Any other use beyond this is considered as incorrect usage. The manufacturer will not be liable for any damage resulting from incorrect usage. The operator carries all risks.

2.3 CONTENTS

Flash MPX player
Power supply block
User manual

2.4 INSTALLATION

The apparatus must be set up in a dry and dust-free room.
Do not install the player too close to a wall. To avoid overheating, the ventilation holes must be kept clear and an air circulation gap must be left above the unit.

2.5 ELECTRICAL CONNECTION

Before use, compare mains voltage with that specified on model plate.

FLASH MPX Manual

INTRODUCTION :

The mpx player is a self-contained Solid State Mpeg4 Video/MP3 Audio player housed in a small aluminum enclosure. The mpx player utilizes the latest development in custom design single chip to decode various Mpeg compression systems including Mpeg4 video, Mpeg4 Audio and Mp3 audio. Mpeg4 video is the latest video compression that gives similar or better video quality than Mpeg2 video (DVD video) at less than half the bit rate. The mpx player has two drives, Compact Flash Card and USB Flash drive. It has16 digital input and is configured to provide a very fast reaction time so that the video/audio playback is instantaneous. The mpx player is pre-programmed to play a multi stage interactive multimedia presentation and to support push buttons and sensors. The mpx player is a solid state device that will give you years of trouble free operation, superb video quality and at a much lower cost.

THE MPX PLAYER DUAL DRIVES :

The mpx player has two drives. It reads from a Compact Flash card OR USB flash drive, but not both. The mpx player is a video/audio playback device only, it is not configured for direct connection into a PC. The USB port on the mpx player is configured strictly for reading the USB Flash drive only. It can not communicate with your PC and/or download files from it.

To copy files into the Compact Flash Card, use a USB card reader and a PC (USB port) and copy the files into the CF card. To copy files into the USB Flash drive, plug it directly into the USB port of your PC and copy the files into it.

TYPE of COMPACT FLASH CARD and USB FLASH DRIVE :

If you are using a **compact flash card** for Audio or Low bit rate Video (under 4 Mbit/s), you can use any standard Sandisk Compact Flash card. For higher bit rate video (over 4 Mbit/s) use Sandisk Ultra II Compact Flash card only.

If you are using **USB Flash drive** use a USB Flash drive with 2.0 interface only. Do not use USB1.1 interface.

The mpx player reads Compact Flash card and USB Flash drive that uses Windows (98 to XP) DOS (FAT) format only, not NTSF. Do not format a new drive. However if you have to format a used drive, format it with DOS (FAT or FAT32) format only (not NTFS). The USB drive is also called Thumb Drive, Cruiser Mini, Stick Drive or Flash drive.

VIDEO file types:

xxx.mpg (Mpeg2 and Mpeg1):
Flash mpx is **optimized** to play Mpeg2 video files at up to 9 Mbps. Consider using Mpeg2 first before using other format.
An Mpeg2 file most likely consists of Mepg2 Video stream and MP2 (Mpeg1 Audio) audio stream. This file should be readily played by the Flash mpx. If your Mpeg2 file does not play, then most likely it is not a program Mpeg file. Use the ImToo converter software to convert it into Mpeg2 program file.

xxx.vob (VOB file from DVD):
A DVD file (vob) most likely consists of Mpeg2 Video stream and MP2 (Mpeg1 Audio) or AC3 audio stream. If the vob file plays on the mpx but no sound, then most likely the audio portion is AC3. To play it on the Flash mpx, you have to convert the VOB file into Mpeg2 file using MP2 audio (Mpeg1 audio) stream. Please see ImTOO encoder software below.

xxx.mp4 MPEG4-10 AVC (h.264):
The Flash mpx plays Mpeg4-2 ASP video only, it will not play Mpeg4-10 video such as Mpeg4 iMovie or Mpeg4 Quicktime.

xxx.mp4 MPEG4-2 ASP file with AAC audio.
Almost all xxx.mp4 file that is encoded with Mpeg4-2 ASP contains Mpeg4 video and AAC audio. This file should be readily played by the Flash mpx, but maximum bit rate is 4Mbps. This video format is also compatible with I-Pod movie, Nero Digital (www.nerodigital.com) etc.

xxx.avi MPEG4-2 ASP file:
Most xxx.avi files contain Mpeg4 video and MP3 audio or PCM16 bit audio. The Flash mpx will readily play any Mpeg4 AVI file, maximum bit rate is 4 mbps. The Mpeg4 video format is compatible with Divx, AVI, 3IVX etc.

xxx.divx MPEG4-2 ASP file with MP3 audio.
The Flash mpx plays DIVX video (www.divx.com), maximum bit rate is 4Mbps. It will also play 3IVX and other Mpeg4 encoder that uses MP3 audio.

AUDIO file types (in order of audio quality):

The Flash mpx plays:
xxx.wav 16bit PCM audio (CD quality at 44100Hz)
xxx.aac AAC audio (CD quality at 192kbps).
xxx.mp3 MP3 audio (CD quality at 256kbps)

SOFTWARE CONVERSION for PC USER:
For PC user, the easiest way to convert your DVD file (VOB), Mpeg2 file and Mpeg4 (AAC) file is by using the Mpeg4 converter software such as from Divx or ImToo Mpeg4 converter (recommended). For MAC user, use Mpeg4 converter that is available from Apple web site or Divx web site.

ImTOO SOFTWARE CONVERTER (PC USER):
The ImTOO Mpeg4 converter software is very easy to use and can be purchased and downloaded from their website at : www.Imtoo.com. When using the Imtoo Mpeg4 converter software, the setting for the Flash mpx is as follows:

PROFILE:
Set profile to DIVX or AVI.

VIDEO:
Video Codec: Mpeg4
Video size: 640 X 480
Bit Rate: Type in 2000 or 3000 (2 Mbps or 3 Mbps).
Frame rate: Type in a frame rate to match the original frame rate. (25 or 29.97)

AUDIO:
Audio Codec: MP3
Audio bit rate: 192 or 256 Kbps.
Frame rate: 44100 Hz

Note: You can also use the ImTOO software to convert your VOB file (from DVD) into a std Mpeg2 file. To convert without any loss, type in to match the Video bit rate, Frame rate and audio bit rate. You can also use this software to convert Wav files into MP3 audio files and AAC audio files.

FOR MAC USER:

Convert your video files into Divx using the Divx6 Converter from www.divx.com. Set the encoder to Home theatre setting.

Maximum bit rate is 3Mbps, audio is MP3 at 192Kbps or 256 Kbps. You can also download MP4 converter software from the Apple web site.

JPEG PICTURE File:

The Flash mpx plays any size Jpeg file and will automatically resize it to fit the screen. While looping a single Jpeg picture, it will automatically display the picture continuously without any black screen in between.

When playing a series of jpeg pictures, the mpx player will automatically go into a slide mode. In a slide mode, it will superimpose the new Jpeg file over the one being played, fade out the Jpeg file being played and fade in the new Jpeg file.

HOW TO LOOP a VIDEO (or series of video files, audio files or Jpeg pictures) AFTER POWERING UP:

NAMING A FILE PLACED AT THE ROOT

For the FLASH MPX player to work correctly, it is strongly recommended to include 6 digits in the file name for all files placed at the root on the memory card. These digits are used to define the default audio level and the possible volume adjustments.

Digit 1 et 2 : undefined - recommended values 00. These two digits could be used to determine a sequence, the order in which the player broadcast the files.

Digit 3 et 4 : define the default volume level of the player - between 01 and 16. Possible values : 01 to16 (01 = minimum volume, 16 = maximum volume, 08 = default volume).

000100cheval.mpg : volume of player is set to its minimum
001600chat.mpg : volume of player is set to its maximum

Digit 5 et 6 : define the pitch of volume adjustment when using Vol+ and Vol- inputs. Possible values : 00 to 16. The volume increment will be + or - the setting indicated by these 2 digits.

00 : no volume setting allowed
01 : adjustment + 1 or - 1 in relation to the default volume level set by digits 3 and 4
08 : adjustment + 8 or - 8 in relation to the default volume level set by digits 3 and 4

16 : adjustment possible on the whole volume range of the player
000800cheval.mpg : volume set at 8 ; no adjustment allowed using inputs Vol+ and Vol-
000808chat.mpg : volume set at 8 ; possible adjustment + 8 and - 8 using Vol+ et Vol-
000116chat.mpg : volume set to minimum value ; possible adjustment on the whole volume scale of the player using Vol+ et Vol-

Important : Do not include spaces nor special characters in the file names.

Any file (or files) in the root directory will automatically loop after powering up.

Caution : For the Flash MPX to work correctly, at least ONE file, video, audio or still frame, must be stored at the root ; the file name must include the 6 digits which will define the volume level of the player and the scale of adjustment.

HOW TO PLAY VIDEO USING PUSH BUTTON (or audio file or Jpeg picture)

To play a file using push button, you have to create file folders. You can create up to 96 file folders, however the first 16 file folder are directly related to the 16 input. E.g.: File folder 01 is for input 1, file folder02 is for input 2 etc.

Upon entering a file folder, the Flash mpx will automatically play the first file. While playing or after playing this file you assign the 16 push buttons again to play other files (inside this file folder). To play the other files inside this file folder, you have to rename each file by adding 6 numbers in front of the file name. The function of these 6 numbers is explained below.

HOW TO CREATE FILE FOLDER :

Create file folder on your PC or MAC and name it using **2 numbers** (numerical) only. Eg: **01, 20, 32** etc.

Maximum number of file folder is 96. File folders **00, 99,98 and 97** are exclusive and are used for specific instruction only.

File folder that does not have 2 numbers will be ignored.

Example:
File folder **01** is accessible by input 1.
File folder **02** is accessible by input 2.
File folder **08** is accessible by input 8.
File folder **16** is accessible by input 16.

INPUTS:

The Flash mpx has **8 input and 1 UP input for a total of 16 input.**

HOW to trigger an INPUT:

To trigger input 1 to 8, short it momentarily to ground.
To trigger input 9, short both 1 and UP momentarily to ground.
To trigger input 10, short both 2 and UP momentarily to ground.
To trigger input 16, short both 8 and UP momentarily to ground.

HOW TO JUMP INTO (ENTER) A FILE FOLDER:

After powering up the player will loop all files in the root directory, relay is OFF. If there is no file in the root directory, then the player will simply idle and wait for an input. This is the Home position of the mpx player. From this home position you can select 16 input.

From home position, if input#1 is triggered, the mpx player will immediately go to file folder **01** and plays the first file in that file folder.

From home position, if input#2 is triggered, the mpx player will immediately go to file folder **02** and plays the first file in that file folder.

From home position, if input#16 is triggered, the mpx player will immediately go to file folder **16** and plays the first file in that file folder.

HOW TO PLAY A FILE WHILE INSIDE A FILE FOLDER:

After entering a file folder the mpx player will automatically play the first file in that file folder. While inside a file folder you can set the mpx player to play 16 more files.

For example while playing the first file inside a file folder, if input #1 is triggered then the mpx player will play the file with a file name that starts with **01**. If input #2 is triggered then the mpx player will play the file with a file name that starts with **02**.

After finish playing a file and depending on the file name, the mpx player will read characters 5 and 6 (file name) and stay or jump into this file folder.

Example: **00**01**22**Lion.mp4. After entering this file folder, mpx player will play this file. After finish playing this file, mpx player will jump to file folder **22**.

If the file folder does not exist, the mpx player will go into default mode and returns to home position.

Below is the definition of the first six numbers of a file name.

First and Second number, 16 possibilities + 00:

ASSIGN AN INPUT TO PLAY A FILE NAME,
020101Horse.mp4, this file will play when input 2 is triggered.
030101Lion.mp4, this file will play when input 3 is triggered.
080101Cat.mp4, this file will play when input 8 is triggered.
160101Tiger.mp4, this file will play when input 16 is triggered.

Third number, 2 possibilities:
TURN RELAY ON or OFF while playing a file.
The third number has 2 possibilities number 0 and number 1.
If the number is 1, Relay is ON. (terminal «Busy» and «Com»)

Example:01**1**022cats.mpg
Turn relay ON while playing this file.
If the number is 0, Relay is OFF.

Example:01**0**022cats.mpg
Relay is OFF while playing this file.

Fourth number, 2 possibilities:
INTERRUPT or NO INTERRUPT while playing a file.
The fourth number has 2 playback possibilities number 0 and number 1.
Standard play with interrupt (number is 0).

Example: 011**0**22cats.mpg
Abort playback if another input is triggered and immediately play the other file.
Play with no interrupt (number is 1).

Example: 011**1**22cats.mpg
Ignore input, no interrupt is allowed while playing this file.

Fifth and Sixth number, 96 possibilities + numbers 00, 99,98 and 97:

JUMP to FILE FOLDER after playing a file.
The fifth and the sixth number refer to a file folder name.

Example:
0010**22**dogs.mp4 after finish playing this file the mpx player will jump to file folder **22**.
1211**18**horses.mpg after finish playing this file the mpx player will jump to file folder **18**
0911**43**lion.mp3 after finish playing this file the mpx player will jump to file folder **43**

STAY inside a FILE FOLDER after playing a file.
The fifth and the sixth number is the same as the file folder name (where the file resides).

Example:
If the mpx player is inside file folder **32** and then play 2200**32**Cats.jpg, then after finish playing this file the mpx player will stay inside file folder **32** and play the first file again.

Fifth and Sixth number is NUMBER 00:
RETURN TO HOME POSITION after playing a file.
The Fifth and the Sixth number is 00.
Number **00** is for Home position, eg. 0110**00**cats.mpg.
After finish playing 0110**00**cats.mpg, go to home position.

Fifth and Sixth number is NUMBER 99:
STOP after playing a file and WAIT for Input. While waiting show the file menu on screen.
The Fifth and the Sixth number is 99.
Number **99** is for Stop after playing a file and wait for input. eg. 0110**99**cats.mpg.
After finish playing 0110**99**cats.mpg, Stop after playing this file and wait for another input.

Fifth and Sixth number is NUMBER 98:
LOOP this file.
The Fifth and the Sixth number is 98.
Number **98** is for Loop playing. eg. 0110**98**cats.mpg.
Loop file 0110**98**cats.mpg.

Fifth and Sixth number is NUMBER 97:
STOP after playing a file and WAIT for Input. While waiting screen is DARK.
The Fifth and the Sixth number is 97.
Number **97** is for Stop after playing a file and wait for input. eg. 0110**97**cats.mpg.
After finish playing 0110**97**cats.mpg, Stop after playing this file and wait for another input. While waiting screen is dark.

The Fifth and the Sixth number do not exist in the CF or USB drive.
If the Fifth and the Sixth number do not belong to any file folder name (does not exists in the CF), then go to HOME position after finish playing this file. E.g: 0110**45**cats.mpg. If file folder 45 does not exist, then after playing this file the mpx player will go to home position.

The first inside a file folder does not have six numbers in front of the file name:
The Flash mpx will play the first file in a file folder even if the file does not have six numbers. While playing it will disregard other input. After playing it will return to Home and loop.

DEFAULT MODE:

In default mode player plays a file to the end with interrupt (standard mode) and relay is ON except in Home position where Relay is Off.
After playing the file, player will automatically go to Home and loop.

EXAMPLE OF A FILE NAME:
001022dogs.mp4

00 First 2 number is 00, first file in directory. Play it when entering this folder.

1 the third number refers to Relay ON. Turn relay ON while playing this file.

0 the fourth number refers to Interrupt while playing. Abort playback if another input is triggered and immediately play the other file.

22 the fifth and sixth number is 22, jump to file folder. Jump to file folder 22 after playing this file.

Example 2 :
120199dogs.mp4

12 the first two numbers is 12. Play this file if input 12 is triggered.

0 the third number refers to Relay OFF. Relay is OFF while playing this file.

1 the fourth number refers to NO Interrupt while playing. Play this file to the end, no interrupt is allowed.

99 the fifth and sixth number is 99. After playing this file stop and wait for another input.

Example 3 :
020097Lion.mp4

02 the first two numbers is 02. Play this file if input 02 is triggered.

0 the third number refers to Relay OFF. Relay is OFF while playing this file.

0 the fourth number refers to Interrupt while playing. Stop and play another file if another input is triggered.

97 the fifth and sixth number is 97. After playing this file stop and wait for another input. While waiting screen is dark.

DARK SCREEN for mpx player:

If you are using the mpx player as a video player and you want to play a dark screen, you can use Black.mpg files or use code 97. These Black files can be downloaded from our web site. There are several Black.mpg files, the main difference is the length of time.

Copy it into the root directory if you want a dark screen after powering up. Copy it into a file folder (and add 00 into the name) if you want a dark screen after entering a file folder.

IDLING with no sound:

If you are using the mpx player as an MP3 player only and you want it to idle (no sound) after powering up simply leave the root directory empty. If you want to idle after playing a file, you can use any Jpeg file (still picture) from your video camera or download silent.mp3 files from our web site or use code 99 or code 97.

HOW TO PROGRAM the mpx player:

Tip: Always hook up the video out of the Flash mpx into a monitor. Test your program's logic by using mp3 file for the first file inside a file folder.

The mpx player's operation is determined by the File folder structure and the first six number of a file name. The easiest way to "program" the mpx player is by creating the entire file folder structure in your PC first. After testing the logic, then you can copy the entire file folder structure from your PC directly into the CF or USB drive.

Hook up the video out into a monitor. The screen will show info about the content of the drive and also the content of the file folder. You can download a CF structure containing MP3 sample sound (ZIP) from our website. The file name is CF-USB.zip.

APPLICATION EXAMPLES:

Example 1: (LOOP MODE)

A video exhibit with continuous playback after powering up. After powering up, loop a series of video clips to be played continuously all day.

The structure of the CF/USB drive is as follows:

F:\…
> **000816Main.mpg**   …. Loop all files after powering up.
> **Lion.mpg**

Explanation: Copy 000816Main.mpg and Lion.mpg video clips into the root directory. After powering up, the mpx player will loop 000816Main.mpg and Lion.mpg.

NOTES:
The above is an example of a video exhibit. For Audio exhibit, replace the video files with mp3 audio files. For Jpeg slide show, replace the video files with Jpeg files (from your video camera).

Example 2: (SIMPLE PUSH BUTTON MODE)

A video exhibit with 1 push button. After powering up, a loop video (Main.mpg) will be played. If push button 1 is triggered a horse video clip will be played. After playing the video, the player will return to play the loop video (Main.mpg).

The structure of the CF/USB drive is as follows:

F:\…

      000816Main.mpg …. Loop this file after powering up.

F:\01

      Horse.mpg … Input 1 plays this file and return home.

Explanation: For the loop video, copy 000816Main.mpg video clip into the root directory.

Create File Folder 01, prepare the Horse video clip and copy this file to file folder **01**.

NOTES:

The above is an example of a video exhibit. For Audio exhibit, replace the video files with mp3 audio files.

Example 3: (Simple push button mode)

A video exhibit with 4 push button. After powering up, a loop video (Main.mpg) will be played. If push button 1 is triggered a horse video clip will be played. After playing the video, the player will return to play the loop video (Main.mpg). If push button 2 is triggered a Lion video clip will be played. After playing the video, the player will return to play the loop video (Main.mpg). If push button 3 is triggered a Tiger video clip will be played. After playing the video, the player will return to play the loop video (Main.mpg). If push button 4 is triggered a Cat video clip will be played. After playing the video, the player will return to play the loop video (Main.mpg)

The structure of the CF/USB drive is as follows:

F:\…

      000816Main.mpg …. Loop this file after powering up.

F:\01

      Horse.mpg   ... Input 1 plays this file and return home.

F:\02

      Lion.mpg   ... Input 2 plays this file and return home.

F:\03

      Tiger.mpg   ... Input 3 plays this file and return home.

F:\04

      Cat.mpg   ... Input 4 plays this file and return home.

Explanation:
For the loop video, copy 000816Main.mpg video clip into the root directory (F:\).
Create File Folder 01,02,03 and 04.
Prepare the Horse, Lion, Tiger and Cat video clips. Copy Horse video clip into File folder **01**. Copy Lion video clip into File folder **02**. Copy Tiger video clip into File folder **03**. Copy Cat video clip into File folder **04**.

EXAMPLES 4 and up are samples for interactive mode.

A video exhibit with 1 push button. After powering up, a loop video (000816Main.avi) will be played. If push button 1 is triggered a horse video clip will be played. While playing no interrupt is allowed. After playing the video, the player will return to play the loop video (000816Main.avi).

The structure of the CF/USB drive is as follows:
F:\…
      000816Main.avi   ... Loop this file after powering up.
F:\01
      000100Horse.avi   ... Input 1 plays this file and return home.

Explanation:
For the loop video, copy 000816Main.avi video clip into the root directory (F:\).
Prepare the Horse video clip and rename it as follows:
Horse.avi video clip, add 6 digit numbers. The new name is **000100horse.avi**.
Copy this file to file folder **01**. Since the first 2 digits is **00,** this file will automatically be played when mpx player is inside file folder **01**.
The third digit is **0**, relay is OFF while playing this file.
The fourth digit is **1**, interrupt is not allowed while playing this file.
The fifth and sixth digit is **00**, mpx player will return to home position (**00**) after playing this file.
NOTES:
The above is an example of a video exhibit. For Audio exhibit, replace the video files with mp3 audio files.

Example 5:

A video exhibit with 2 push button and no interrupt while playing. After powering up, a loop video (000816Main.mp4) will be played. If push button 1 is triggered a horse video clip will be played. While playing no interrupt is allowed. After playing the video, the player will return to play the loop video (Main.mp4). If push button 2 is triggered a lion video clip will be played. While playing no interrupt is allowed. After playing the video, the player will return to play the loop video (000816Main.mp4).

The structure of the CF/USB drive is as follows:
F:\\…

000816Main.avi	... Loop this file after powering up.

F:\\01

00100Horse.avi	... Input 1 plays this file and return home.

F:\\02

000100Lion.avi	... Input 2 plays this file and return home.

Example 6:

An Audio exhibit with 2 push button and no interrupt while playing. Exhibit is silent after powering up. After powering up, audio is silent. If push button 1 is triggered a horse audio will be played. While playing no interrupt is allowed. After playing the audio, the player will stop and wait. If push button 2 is triggered a lion audio will be played. While playing no interrupt is allowed. After playing the audio, the player will stop and wait.

The structure of the CF/USB drive is as follows:
F:\\…
F:\\01

000100Horse.mp3	... Input 1 plays this file, return home and wait.

F:\\02

000100Lion.mp3	... Input 2 plays this file, return home and wait.

Example 7:

A video exhibit with 2 push buttons and switching between the 2 video clips while playing a video clip. After powering up, a loop video will be played. If push button 1 is triggered a horse video clip will be played. While playing horse video clip if push button 2 is triggered, then lion video clip will be played. While playing Lion video clip, if push button 1 is triggered horse video clip will be played again. After finish playing the video clip, the loop video will be played again.

The structure of the CF/USB drive is as follows:
F:\\…

000816Main.avi	... Loop this file after powering up.

F:\\01

000098Main.avi	... Automatically loop this file.
010001Horse.avi	... In1 plays this file and stay in folder 01.
020001Lion.avi	... In2 plays this file and stay in folder 01.

Example 8:

Similar to the 2 push button exhibit, but after powering up screen is dark. If push button 1 is triggered a horse video clip will be played. While playing horse video clip if push button 2 is triggered, then lion video clip will be played. While playing Lion video clip, if push button 1 is triggered horse video clip will be played again. After finish playing the video clip, screen is dark again.

The structure of the CF/USB drive is as follows:
F:\…

000816Black.mpg	... Loop this file after powering up.

F:\01

010097Horse.mpg	... In 1 plays this file and wait while dark.
020097Lion.mpg	... In 2 plays this file and wait while dark.

Example 9:

An exhibit using motion detector (or a push button) to sequentially play a set of video clips. The motion detector will play horse video clip and after playing the screen is dark. If the motion detector is triggered again, the lion video clip will be played and after playing the screen is dark. If the motion detector is triggered again, the cat video clip will be played and after playing the screen is dark. If the motion detector is triggered again, the tiger video clip will be played and after playing the screen is dark. If the motion detector is triggered again, it will return to play horse video clip again and after playing the screen is dark.

The structure of the CF/USB drive is as follows:
F:\…

000816Black.mpg	

F:\01

000097Black.mpg	... Play this file and wait for input and dark.
010120Horse.mpg	... In 1 plays this file and jump to folder 20.

F:\20

000097Black.mpg	... Play this file and wait for input and dark.
010121Lion.mpg	... In 1 plays this file and jump to folder 20.

F:\21

000097Black.mpg	... Play this file and wait for input and dark.
010122Cat.mpg	... In 1 plays this file and jump to folder 22.

F:\22

000097Black.mpg	... Play this file and wait for input and dark.
010101Tiger.mpg	... In 1 plays this file and return to folder 01.

Example 10:

An AUDIO exhibit using a push button to sequentially play a set of Audio clips.
After playing a file the player will stop and wait for an input. If the push button is triggered again, the player plays the next file. After finish playing the last sound, it will return to play the first sound again..

The structure of the CF/USB drive is as follows:
F:\...
    000816Silent.mp3
F:\01
    000099Horse.mp3   ... Play this file, stop and wait for input..
    010020Tiger.mp3   ... In 1 plays Tiger and jump to folder 20.
F:\20
    000099Silent.mp3   ... Play this file, stop and wait for input..
    010021Lion.mp3   ... In 1 plays Lion and jump to folder 21.
F:\21
    000099Silent.mp3   ... Play this file, stop and wait for input..
    010022Cat.mp3   ... In 1 plays Cat and jump to folder 22.
F:\22
    000099Silent.mp3   ... Play this file, stop and wait for input..
    010023Bird.mp3   ... In1 plays bird and jump to folder 23.
F:\23
    000099Silent.mp3   ... Play this file, stop and wait for input..
    010024Horse.mp3   ... In 1 plays Horse and jump to folder 24..
F:\24
    000099Silent.mp3   ... Play this file, stop and wait for input..
    010020Tiger.mp3   ... In 1 plays Horse and return to folder 20..

Example 11:

An exhibit using a motion detector and 4 push buttons. After powering up, the screen is dark. When a visitor enters a room, the motion detector will trigger the mpx player and starts the attract video. The visitor has a choice to trigger the 4 push buttons. Each push button plays a specific video clip**.** After playing a video clip, the attract video will play again. After finish playing the attract video, screen will go dark again and wait for the motion detector to trigger again.

The structure of the CF/USB drive is as follows:
F:\...
    000816Black.mpg

F:\01

001000Info.avi	... Play this file, no interrupt and return home.
020001Horse.avi..	... Input 2 plays this file and stay in folder 01
030001Lion.avi	... Input 3 plays this file and stay in folder 01
040001Cat.avi	... Input 4 plays this file and stay in folder 01
050001Tiger.avi	... Input 5 plays this file and stay in folder 01

TECHNICAL SPECIFICATIONS:

<u>Video format:</u>
- Mpeg4-2 ASP video xxx.avi, xxx.divx or xxx.mp4.
- Mpeg1 and Mpeg2 Programmed video files, xxx.mpg.
- JPEG – JPG still pictures,xxx.jpg.

<u>Audio format:</u>
- MP4- Mpeg4 audio files, xxx.aac.
- MP3 – MP3 audio files, xxx.mp3.
- WAV – PCM16 bit wav files, xxx.wav.

<u>CF card and USB Drive:</u>
- For low bit rate video (less than 2 mbit/sec) and Audio use any Sandisk Compact Flash Card.
- For higher bit rate video application (up to 9 mbit/sec) use only Sandisk Ultra II Compact Flash Card .
- For USB Flash drive use USB 2.0 only.

<u>Bit Rate:</u>
- Mpeg2 Video bitrate VBR or CBR is maximum 9 Mbps. Ideal bit rate is 6 Mbps.
- Mpeg4 Video bit rate is max 3 Mbps, VBR or CBR. Ideal bit rate is between 2 to 3 Mbps.
- MP3 audio bitrate is maximum 320 kbps, ideal bit rate is between 128, 192 and 256 Kbps.
- AAC audio bitrate is maximum 256 kbps, ideal bit rate is 128 or 192 Kbps.
- WAV audio bit rate is maximum 48Khz. Ideal bit rate is 44.1Khz and 48Khz.

OUTPUT Flash mpx:

- Video Composite out is standard Yellow RCA jack
- S Video (Y/C) out is standard mini 4 pin din connector.
- Headphone out, stereo100 mWatt, 36 Ohm on 3.5 mm jack.
- Audio line out, 2 V p/p stereo on 2 RCA jacks (red and white).
- 14 Watt speaker output, 8 ohm on 4 mini screw on terminal.
- Audio line out and speaker out and headphone out are simultaneously controlled by the volume up/down.
- Relay output is available on Busy and Common terminals. The output is Dry Contact, Normally Open rated at 1 Amp.

INPUT Flash mpx:

- 8 + 1 UP input on screw on terminals, plug in removable.
- Input 1 to 8, to trigger short momentarily to ground.
- Input 9 to 16, to trigger short both an Input and UP input momentarily to ground.
- Volume UP and Volume Down input, to adjust the volume short it momentarily to ground. Volume is adjustable from 0 to 16. Default setting is 4.

ENCLOSURE Flash mpx:

- Aluminum enclosure (desktop), 7.25" W X 4.25" D X 1.2" H.
- Weight is approximately 1.2 lbs.
- Shipping weight with Power Supply & cord is 3 lbs.

Power supply Flash mpx:

- 120 – 240VAC Universal switching power supply complete with a detachable PC style power cord.
- Power output is 12VDC, 30 watt.

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http://www.id-al.com

http://www.wsystem.com